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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/585,567	07/05/2006	Nicholas Karyambas		7958

7590
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10/29/2008

EXAMINER

NGUYEN, HOANG M

ART UNIT	PAPER NUMBER
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3748

MAIL DATE	DELIVERY MODE
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10/29/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/585,567	Applicant(s) KARYAMBAS, NICHOLAS	
	Examiner Hoang M. Nguyen	Art Unit 3748	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 is/are pending in the application.
4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

The specification is objected to because there too many typographical errors.
Also, a brief description of the drawing section is missing.

The abstract is objected to because it should consist of only one paragraph.

Claim 1 is rejected under 35 U.S.C. 101 because the disclosed invention is inoperative and therefore lacks utility.

Although the skilled person could produce a device having the features of claim 1, the description does not disclose the device in a manner which would enable it to work as described, as such functioning would seem to be in contravention of well-established physical laws. In the present case, the second law of thermodynamics would seem to be violated by such a device, as it is alleged that such a device continuously produces energy and provides refrigeration without needing any external heat source, apparently a Perpetual Motion Machine of the Second Kind. It is therefore doubtful that such a device could be used as described, leading to the subject-matter of claim 1 is inoperative.

Claim 1 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

As noted above in the 101 rejection, the second law of thermodynamics would seem to be violated by such a device, as it is alleged that such a device continuously

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produces energy and provides refrigeration without needing any external heat source, apparently a Perpetual Motion Machine of the Second Kind. Therefore, it's unclear how the system is working.

Claim 1 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The newly added "a length of 30 mm" in claim 1 seems to be new matter because it wasn't in the specification as originally filed.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 1 is rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. 5316568 (Brown) in view of WO 94/20741 (Kim). Brown discloses a device for converting thermal energy into kinetic energy (see figures 18 and 20), said device using a rarefied gas (col.14, lines 3-15) as the working fluid and comprising: a vessel divided by a region (92) containing microscopic slots (12) (col.4, lines 48-50 the fact that the pore openings can be rectangular or oval in shape allows them to be interpreted as

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slots) with sizes comparable to the mean free path of the molecules (column 2, lines 26-28) of the gas, said microscopic slots having diverging inner surfaces (col.4, lines 41-44) and forming slots grouped together in small parallel modules (see figure 2), said microscopic slots having a molecular layer adsorbed upon said inner walls (col.6, lines 34-45); a gas turbine (96,104) which performs adiabatic expansion on the gas; a heat exchanger (106) located downstream of the gas turbine (96,104) to provide heat energy to the gas flow. The subject-matter of claim 1 therefore differs from this known device in that the heat exchanger transfers heat from the ambient air to the working fluid. Kim discloses the provision of a heat exchanger to transfer heat energy from the ambient air to the working gas flow is well-known in the field of closed circuit turbines. The skilled person would therefore regard the use of such a heat exchanger in the device according to claim 1 as obvious and a matter of normal design procedure. Regarding the length 30mm, it would have been obvious to elect the size of the vessel in the specific dimension as claimed for the purpose of producing appropriate energy output.

Claim 1 is rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. 3670500 (Schultz). Schultz discloses a device for converting thermal energy into kinetic energy (see figures 1, 3-7), said device using a rarefied gas as the working fluid and comprising: a vessel 27, 46, 57, divided by a region containing microscopic slots (note slots of the membranes) with sizes comparable to the mean free path of the molecules of the gas, said microscopic slots having diverging inner surfaces and

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forming slots grouped together in small parallel modules, said microscopic slots having a molecular layer adsorbed upon said inner walls; a gas turbine (34, 45) which performs adiabatic expansion on the gas; a heat exchanger (38, 44) located downstream of the gas turbine to provide heat energy to the gas flow, (note column 3, lines 15-47 for the concept of isothermal compressor, and using ambient air for heat transfer purposes). Schultz does not disclose the length 30mm. However, it would have been obvious to elect the size of the vessel in the specific dimension as claimed for the purpose of producing appropriate energy output.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Goldenblum discloses a system using membrane and ambient heat source.

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Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Examiner Nguyen whose telephone number is (571) 272-4861. The examiner can normally be reached on Tuesday--Friday from 12:30 AM to 10:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas E. Denion can be reached on 571-272-4859. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Hoang M Nguyen/
Primary Examiner, Art Unit 3748

HOANG NGUYEN
PRIMARY EXAMINER
ART UNIT 3748

Hoang Minh Nguyen
10/31/2008

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